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EXAMINER

KENDALL, CHUCK O

ART UNIT PAPER NUMBER

2122

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/935,647

Applicant(s)

TZENG, HWAI-DER

Examiner

Chuck Kendall

Art Unit

2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. This action is in response to the application filed 08/24/01.
2. Claims 1 – 20 are pending.

Claim Objections

3. Claim 2 is objected to because of the following informalities: In line 2 “judgement” is misspelled. Appropriate correction is required.

Claim 11, is objected to because of the following informalities. On page 22, line 22 claims read “ confirming if other instrument is used”. Should read confirming if another instrument is used, or plurality of instruments are used. Appropriate correction is required.

Claim 14 is objected to because of the following informalities: Applicant claims recites on page 24, line 23 “ *the testing programs* being reproduced mutually, *the testing programs* being reproduced to the debugging programs”. Should read “ *a testing program*”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 –16 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claims 2 -16 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in Applicant’s disclosure filed 08/24/2001.

Claim 2 recites the limitation, “*picture of the main menu*” on page 18 line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitations “*the selected objects*”, on page 18 line 18-19, “*the testing program*” on page 19, line 6 and “*the record of identification*” on line 7. There is insufficient antecedent basis for this limitation in the claim.

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Claim 4 recites the limitations “*the program manner*” and “*the program parameter*” on lines 1, and 2, as well as the limitations “*the designer*” on line 19, “*the picture*” on line 23, “*the flow chart*” on line 7, “*the testing flow chart*” on line 8, “*the function test*” on line 11, “*the debug test*” on line 11 and “*the limit value*” on line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. On page 20 lines 3 and 4 Applicant claims “*he may input...*”, and also on line 7 Applicant claims “the picture *may indicate* the flow chart button to prepare to proceed a step of selecting the testing flow chart”. The record is not clearly understood if an input or indication is being made or not.

Claim 4 on page 20, line 11 recites “*such as* the function test or debug”, as well as in claim 14 on page 24 line 13. The phrase “*such as*” renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 5 recites the limitation “*the testing flow chart*”, on page 20 line 21. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitations “*the testing flow chart*” as well as “*the exciting signal*”, on page 20, line 4, “*the testing program*” on line 6, and also “*the debug program*” on line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation “checking if *the mode of the footing* ... standard mode of the footing...”, on page 20, line 14, as well as, “*the footing definition*”, on line 16. There is insufficient antecedent basis for this limitation in the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 8, recites the limitation “*the starting procedure*”, on page 21, line 21 as well as “*the testing flow chart*”, on page 22, line 6.

Claim 10, recites the limitation “*the procedure*”, “*the exciting signal*”, “*the values*”, and “*the picture* of selecting the *testing flow chart*”, on 22, lines 13 – 19. There is insufficient antecedent basis for this limitation in the claim.

Claim 11, recites the limitations “*the procedure of setting a measuring signal*” on page 22, line 21, and “*inputting the values*” on page 23, line 1 and “*the picture of selecting the testing flow chart*”. There is insufficient antecedent basis for this limitation in the claim.

Claim 12, recites the limitation “*the exciting signal*” as well as in “*the picture of selecting the testing flow chart*”.

Claim 13, recites the limitation “*wherein the procedures of updating codes of the testing program*” on page 23, line 15-16.

Claim 14, recites the limitations “*selecting the class of the program code*”, on page 24, line 5, as well as “*select the number of the primary and secondary testing or debugging*”, on page 24, line 11 and “*selecting amending the program code*” on line 9. Also on line 3, “*the working process*”, and on line 14, of the same page “*the cancel process*”. On page 24, line 17, Applicant cites the limitation, also see “*the manner of reproduction*”, on page 24 line 22 and “*the picture of the program generator*” and “*the picture of the main menu*” on page 24, line 19. There is insufficient antecedent basis for this limitation in the claim.

Claim 16, recites the limitation “*preparing the hint of documents and figure files*”, on page 25 line 16. There is insufficient antecedent basis for this limitation in the claim.

Claim interpretations

5. Claims 3, 6, 7, 9 – 13, & 16 are not being considered by Examiner at this time, because claim language is not clear enough for Examiner to respond properly.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 2, 5, 14, 15, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Bowman USPN 6,725,399 B1.

Regarding claim 1, Bowman anticipates a humanity interface development system of a testing program of a circuit board, comprising:

a main menu by which an operator may select one of multiple items with data pre-built therein (FIG. 2, 1.3), the main menu including:

building configuration of objects to be tested (2: 40 –55), defining footing of objects to be tested(2: 40 –55), using a program generator(2: 47 – 50), building data of testing chapters (2: 40 –55), building documents and figure files of objects to be tested (FIG. 1, 2.0 Test Case Development), building reference data (3: 11 – 16, also 76: 1 – 10), building intercepted data of coordinates of positions of parts (3: 11 – 16), building relationships of items to failure rates of parts (3: 11 – 16), and linking and compiling files (74: 60 – 62, shows compiling and *note: instructions are linked during execution*), building of data of each object to be tested co-operating with the program generator to produce the required program (FIG. 2, see 1.2 – 1.8), and the items of building data of testing chapters and linking and compiling files co-operating with steps of building of data of each object to be tested (74: 60 – 62, shows compiling and *note: instructions are linked during execution*), so that the operator may conveniently use data base and programs that are built according to existing orders of the system for testing a circuit board (31:23 –27, see database).

Regarding claim 2, the humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein building configuration of objects to be tested includes the following steps:

selecting a name of the object to be tested (48: 33, see test plan identifier):

displaying a name of the object to be selected from an existing database of a display, choosing and identifying the name of the object (23:20 –25, see select and add from pull down);

displaying the data of the object to be tested (23:10, see date):

displaying original chosen records in the database to facilitate *judegment* of following addition and amendment (See Example 3 on Column 23); and

selecting processed items (See Example 3 on Column 23:35, see step 14 in table);

selecting items of addition, deletion, amendment or returning to a previous page, wherein if the item of addition is chosen, the operator needs to input the data of the new board object to be tested, then store the data, and then return to the step of selecting the name of the object to be tested (6:30 – 35, see delete and update);

if the item of deletion is chosen, the data of the object to be tested is deleted directly (6:30 – 35, see delete);

if the item of amendment is chosen, the data of the object to be tested is amended, and is stored (6:30 – 35, see update);

if the item of returning to the previous page is chosen, the operator may return to the picture of the main menu, whereby contents of each basic configuration of the objects to be tested may be built (6:50 – 67).

Regarding claim 5, the humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein a procedure of selecting the testing flow chart includes:

file maintenance or reproduction (48: 43, see definition and maintenance), and selecting a button of a testing flow chart (48: 43 – 46, see graphical user interface operation).

Regarding claim 14, the humanity interface development system of a testing program of a circuit board in accordance with claim 5, wherein the process of file maintenance or reproduction includes the following steps:

selecting file maintenance or reproduction: selecting the process of file maintenance or reproduction, (Bowman, 48: 43, see definition and maintenance) if the process of file maintenance is selected, it is necessary to select the manner of file maintenance, if the process of reproduction is selected, it is necessary to select the manner of reproduction; wherein, if the operator selects the manner of file maintenance, it includes the following steps (Bowman, 48: 43, see definition and maintenance):

selecting the class of the program code (7: 15 – 20):

selecting a testing parameter or a debugging parameter, then returning to the picture of selecting the testing flow chart, to respectively perform the design of the testing program or the debugging program; selecting amending the program code (48: 43 – 46, see graphical user interface operation):

selecting the content of amendment for testing or debugging, so as to select the number of the primary and secondary testing or debugging step (Bowman, FIG. 4, 3.2), and to make sure the content of the program, and selecting the manner of amendment for different program code, so as to select the working process such as deletion, insertion or cancel (Bowman FIG. 5, 4.4, also see associated text), then selecting confirmation, if selecting the cancel process, then directly returning to the picture of selecting the testing flow chart (FIG.4, see data flow diagram 3.5), if selecting the working process of deletion or insertion, then amending the content of the data base, and then returning to the procedure of selecting amending the program code (FIG. 4, 3.7);

selecting returning to the picture of the program generator or returning to the picture of the main menu, then returning to the destined position, to facilitate the following operator (75: 30 – 35, see test data generator);

if the operator selects the manner of reproduction, it includes the steps of selecting three modes of reproduction, including (76: 1 – 10):

the testing programs being reproduced mutually, the testing programs being reproduced to the debugging programs, and the debugging programs being reproduced mutually, after selection, filling the reproduced content, then selecting confirmation, if not confirmed, then returning to the picture of selecting the testing flow chart, if confirmed, then copying the reproduced content and returning to the picture of filling the reproduced content to repeat the above-mentioned work until the work is finished (76: 1 – 10).

Regarding claim 15, which claims similarly as claim 2, see rationale as previously discussed above.

Regarding claim 17, which claims similarly as claim 2, see rationale as previously discussed above.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman USPN 6,725,399 B1 as applied in claim 1, in view of Grover et al. USPN 5,737,518.

Regarding claim 4, Bowman discloses all the claimed limitations as applied in claim 1 including the additional limitations of the humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein the a procedure of using the program generator including the following steps:

displaying the name of the object to be tested (23:10, see date):

displaying the name the object to be tested and the related data for identification of the designer (23:20 –25, see select and add from pull down), confirming: if the operator confirms the object to be tested, the following procedure may be performed (7: 50 – 60, see validating); if the operator does not confirm the object to be tested the picture returns to the main menu(7: 50 – 60, see validating, Examiner is interpreting this limitation to be if not validated from above recitation). Bowman doesn't explicitly disclose selecting the program manner where the operator may respectively select the modes of the program parameter, including testing, debug or limit. However, Grover does disclose in 2: 17 – 20, that "Because each object usually has many attributes, such programs can be quite complex and time, consuming to develop, and must themselves be tested and debugged". Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine, Bowman and Grover because, debugging during testing would ensure that all programs being developed are being tested properly and this inherently makes the testing more efficient.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman USPN 6,725,399 B1 as applied in claim 6, in view of Pope et al. USPN 5,335,342.

Regarding claim 8, Bowman discloses the humanity interface development system of a testing program of a circuit board (FIG. 5). Bowman doesn't explicitly disclose a flow chart

including judging a parameter and determining if it is a new step or an old step, to respectively enter the step of definition of a new step or download of an old step. Bowman does disclose numerous test plans and schedules (FIG. 5) as well as implementing new parameters and modifying and upgrading test parameters (7: 60 – 67). Pope discloses starting a flow chart as well as comparing (judging) a parameter FIG.5, 508. Therefore it would have been obvious to one of ordinary skill in the art to combine Bowman and Pope because, being able to compare or determine newer or more up to date parameters during testing would improve the ease of modification.

11. Claims 18 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman USPN 6,725,399 B1 as applied in claim 1, in view of Silva et al. USPN 6223,306 B1.

Regarding claim 18, Bowman discloses all the claimed limitations as applied in claim 1 above.

selecting the object to be tested (FIG. 3, 2.7): selecting the corresponding object to be tested, or selecting the item of returning to the main menu to return to the destined location (FIG. 3, 2.3, and 2.7, and associated text);

selecting inspection or building (75: 30 – 35, for building see test generating): after selecting the object to be tested, then selecting the item of selecting inspecting the circuit board or building the data base, if selecting the item of inspecting the circuit board, then selecting controlling the picture to directly amplify the inspection picture, if selecting the item of building the data base, then selecting building the related coordinate (and see database in FIG. 4, 3.7).

Bowman doesn't explicitly disclose selecting controlling the picture: selecting locally amplifying the picture by the mouse or amplifying the sub-picture and selecting building the related coordinate: selecting the mode of building the related coordinate for the reference point or member. However, Silva does disclose zooming and controlling size or position and number of pixels the image would be zoomed in on (amplified) (14: 45 – 50). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Bowman and Silva because, being able to identify and view images and objects during testing would allow the user to better view and modify objects.

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Regarding claim 19 Bowman discloses all the claimed limitations as applied in claim 1 above, including the added features of the humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein the procedure of building relationships of items to failure rates of parts includes the following steps (8: 5 – 25): selecting the name of the object to be tested (8: 50 – 55, see test cases). Bowman doesn't disclose displaying the picture so as to indicate the picture of the corresponding part. Silva discloses a viewing tool which obtains during testing (14: 45 – 50). Therefore it would have been obvious to one of ordinary skills in the art at the time the invention was made to combine Bowman and Silva because, being able to identify and view images and objects during testing would allow the user to better view and modify objects.

Regarding claim 20, the humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein the procedure of linking and compiling files includes the following steps (74: 60 – 62, shows compiling and *note: instructions are linked during execution*) selecting the name and picture of the object to be tested (for image see Silva 14: 45 – 50); after confirmation, then making the testing program by the compiling process, if not confirmed, returning to the main menu (Bowman, 7: 10 – 20, for confirmation see valid).

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuck Kendall whose telephone number is 703-3086608. The examiner can normally be reached on 10:00 am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 703-3054552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CK.

A handwritten signature in black ink, appearing to read "John Chavis", with a stylized flourish at the end.

JOHN CHAVIS
PATENT EXAMINER
ART UNIT 2124